

**FAST NATIONAL UNIVERSITY OF COMPUTER AND
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DEPARTMENT OF COMPUTER SCIENCE

SL2002 – SOFTWARE DESIGN AND ARCHITECTURE LAB



LAB MANUAL # 01

Writing user stories, acceptance criteria and test cases

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Agile Product Development

In practical terms, agile software development methodologies are all about delivering small pieces of working software quickly to improve customer satisfaction. Iterative development is a way of breaking down the software development of a large application into smaller chunks. A user story is the smallest unit of work in an agile framework. A user story is an informal, general explanation of a software feature written from the perspective of the end user. It identifies the user, their desires, and intention.

Characteristics of a user story

A user story template often follows the same format. The three components of a user story are:

1. **Who.** This is typically a job role, customer or type of user, also known as the user persona.
2. **What.** This is the goal that the user wants the product to accomplish or implement.
3. **Why.** This is the reason the user needs the feature or functionality.

The result is a sentiment like, “As a <who>, I want <what> so that <why>.” An Agile user story is meant to be short, usually fitting on a sticky note or note card.

Examples of user stories

Following the above format, a few examples of a user story are:

- As a user, I want to upload photos so that I can share photos with others.
- As an administrator, I want to approve photos before they are posted so that I can make sure they are appropriate.
- As a social media manager, I want to tag the photos under specific categories so that I can filter and search the photos for future use.

Focus on the user and make the team remain concentrated on providing solutions to users' problems;

Motivate and inspire the development team to be creative and critical when creating solutions;

As user stories focus on using business terms instead of technical jargon, both developers and customers can easily comprehend the purpose of the writing.

Acceptance criteria

In Agile, acceptance criteria refer to a set of predefined requirements that must be met to mark a user story complete. Acceptance criteria are also sometimes called the “definition of done” because they determine the scope and requirements that must be executed by developers to consider the user story finished.

Hence, the User story defines the requirement for any functionality or feature while the Acceptance Criteria defines the ‘Definition of done’ for the user story or the requirement.

Acceptance criteria. Bridge from your user stories to code and test cases

Its format is as follows:

“Given some **precondition** when I do some **action** then I expect the **result**”.

How Do You Convert User Stories Into Test Cases?

The following is a sample template that includes a user story, acceptance test, and a test case:

- User Story:**

As a [user role],
I need [the ability to do something],
so that I can [get some benefit or avoid some consequence]

- Acceptance Criteria/Test:**

Given [input | preconditions],
when [actions | triggers],
then [output | consequences].

- Test Case:**

TC ID [id/unique number]
TC Title
Pre-requisites [preconditions to be fulfilled to carry further steps]
Test Procedure [step by step procedure for execution]
Expected Results

- **Positive Scenario:**

Positive (Happy Path) scenario tests the basic requirements of an application. If the Happy Path outcome is a failure, then the rest of the testing may be blocked due to critical defects.

- **Negative Scenarios:**

Test the negative scenarios to see how the system behaves in case of any inappropriate inputs.

- **Boundary Analysis:**

Test the boundary conditions to verify the system behaves correctly at the minimum and maximum limits without any abrupt behavior.

Example:

User story:

As a **Student**, I want to **login to flex** to **access** it.

Acceptance criteria:

Given that *I am a registered student*, **when** *I login to flex by entering my credentials* **then** *I should access it.*

Test case ID	Test case title	Test case type	Pre requisites	Procedure/Steps	Expected results
1	Login with valid credentials	Positive	Internet running User must be registered	Navigate to flex student's login page. In the username's and password's field enter the correct username and password	User should successfully login to flex.
2	Login with blank credentials	Negative	Internet running User must be registered	Navigate to flex student's login page. Leave the username and password's field blank and click on login	User should not login to flex.
3	Login with invalid credentials	Negative	Internet running User	Navigate to flex student's login page. In the	User should not login to flex.

			must be registered	username's and password's field enter the in- correct username and password	
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